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ABSTRACT

THE RECOGNITION OF THE SYSTEMATIC NATURE OF THE INTERFERENCE OF THE MOTHER TONGUE WHEN LEARNING A SECOND LANGUAGE IS AMONG THE MOST SIGNIFICANT ADVANCES IN LINGUISTICS FOR THE TEACHING AND LEARNING OF FOREIGN LANGUAGES. THE WORK OF WEINREICH SHOWED THAT INTERFERENCE BETWEEN LANGUAGE SYSTEMS--THE ABSORPTION OF LOAN WORDS, CALQUES, AND PHONOLOGICAL, MORPHOLOGICAL, AND SYNTACTICAL FEATURES FROM ONE LANGUAGE TO ANOTHER--DID NOT HAPPEN BY SOME MYSTERIOUS PROCESS IN MID-AIR OR IN MID-HISTORY, BUT IN THE NERVOUS SYSTEMS OF BILINGUAL SPEAKERS. THE MORE INDIVIDUALS THERE WERE WHO WERE BILINGUAL IN THE TWO LANGUAGES OF THE REGION, AND THE GREATER THEIR COMMUNITY PRESTIGE, THE MORE CHANCE THERE WAS OF THEIR OWN "INTERFERED-WITH" SPEECH HABITS BEING ADOPTED BY MONOLINGUAL SPEAKERS OF THE SURVIVING LANGUAGE. RATHER THAN LINGUISTICALLY ANALYZING AND COMPARING TWO LANGUAGES TO PREDICT POSSIBLE ERRORS ON THE PART OF THE LEARNER, THE AUTHOR FEELS IT SAFER TO ANALYZE THE ERRORS THAT ARE ACTUALLY MADE AND THEN START LOOKING FOR THE REASONS IN THE SYSTEM. HE WARNS THAT "SYSTEMATIC PERCEPTUAL DISTORTION" IN BOTH PUPIL AND TEACHER CAN PRODUCE FAULTY DIAGNOSIS OF AN ERROR WHERE AN AWARENESS OF STRUCTURAL FACTORS IS LACKING. AN ILLUSTRATION OF MISDIAGNOSIS ON THE PHONOLOGICAL LEVEL IS GIVEN IN A CONTRASTING OF ENGLISH AND URDU STOP CONSONANTS. (AMM)

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THE NATURE AND DIAGNOSIS OF INTERFERENCE PHENOMENA

by Norman Denison

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THE NATURE AND DIAGNOSIS OF INTERFERENCE PHENOMENA*

NORMAN DENISON**

It gives me very great pleasure indeed to be here today. I hope you will pardon my total ignorance of the Filipino scene. This is not only my first visit to your country, but it is, I must confess, the first chance I have had to become more acquainted with its problems than a passing reading of the more sensational newspapers. I hope that my present visit will produce less sensational reactions than did a recent visit by a group of young compatriots; and perhaps one way in which I can ensure that this will be the case is to stick to my subject.

The topic on which I have been asked to speak to you today is 'The Nature and Diagnosis of Interference Phenomena.' Perhaps the recognition of the systematic nature of L_1 interference — that is, interference of the mother tongue — is among the most significant advances in linguistics for the teaching and learning of foreign languages. The credit for this recognition is due largely to two scholars in the United States, first and foremost to Prof. Uriel Weinreich, who produced in 1953 a work called *Languages in Contact* with which I am sure many of you are familiar. The second person who contributed significantly to work in this field in the 1940's and 50's was Einar Haugen, a Norwegian-American, who in a number of contributions developed the idea of interference in bilingual situations. Perhaps the best known of his works is *The Norwegian Language in America.* These and other scholars also contributed to discussions of this topic at the VIII International Congress of Linguists in Oslo in 1957, and subsequently at the IX Congress in the United States. Between those two congresses you will find relevant contributions and bibliographical information in the proceedings of the Fourth International Congress of Phonetic Sciences held in Helsinki in 1961.

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* Revised version of a speech at the convocation jointly sponsored by the Philippine Association for Language Teaching and the Institute for Language Teaching, at Benitez Hall, College of Education, University of the Philippines, August 27, 1966.

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The basis for interference studies was established not primarily with reference to the problems of teaching and learning foreign languages but rather as a more 'pure' investigation, if you would like to call it that, of the phenomena of bilingualism and multilingualism. The work of Weinreich in particular established a framework for dealing with the mechanism of interference where two languages are present in the same individual. The theoretical interest lay in the demonstration of the mechanism which brought about such puzzling phenomena as 'areal' features, those linguistic characteristics at all levels of analysis — phonological, morphological, semantic, syntactical and stylistic — which seem to cross language frontiers and even to cross language-family frontiers. People had earlier noticed, for instance, that in the Balkans there were certain linguistic features common to a number of languages which were not closely related genetically. It is true that they were all, in that area, members of the Indo-European family, but the individual languages were members of different and quite separate subgroups. It was nevertheless noticed that for instance in Roumanian and Bulgarian there was an absence of the infinitive form of the verb[1]; Roumanian is a Romance language and Bulgarian a Slavonic language, but they are geographically contiguous. Similarly, it was noticed that modern Bulgarian and modern Roumanian had developed a definite article placed after the noun rather than before it. Now it was rather remarkable that Bulgarian should have a definite article at all, because the Slavonic languages in general have not developed a definite article. It was even more remarkable that, having developed, it should have the rather unusual postnominal position and that the same should also be true of the neighbouring language, Roumanian. There were phonological peculiarities covering whole continents and subcontinents, such as the occurrence of retroflex consonants (some of these are illustrated for Urdu later in this paper) in the languages of India and Pakistan, languages which spread across two quite unrelated language families — Indo-European and Dravidian.

Then, people have been puzzled by those so-called pre-Celtic morpho-phonemes of a Celtic language like Welsh, which seem not to be Indo-European in flavor at all. Celtic is one of the main

[1] In the case of Roumanian, it would be more accurate to speak of a restriction of function, but the syntactical parallel is striking.

groups in the Indo-European family of languages, and no other group in that family shows modifications of initial consonants of the kind one finds in the Celtic languages. To be more specific, what you have in modern Welsh is a series of initial consonant alternations such that there is a word *tad* meaning 'father', but if I have to speak of '*your* father' (or, more literally, 'thy father') this becomes *dy dad*, and if I want to say '*my* father' I say *fy nhad*; and if I want to say '*her* father' I say *ei thad*.[2] All this was very puzzling until the theory was evolved that this must be a reflection of the linguistic habits of an earlier population in that area, a pre-Indo-European stratum of population, and that it probably reflected some of the peculiarities of that linguistic type. However, very little evidence was brought to show what kind of language might have been responsible.

The relative nebulosity of the so-called substrate theory tended to encourage this kind of speculation. One said for instance that the presence in modern French and in modern Welsh of more or less fronted varieties of /u/, together with the occurrence of similar sounds in some N. Italian dialects, was probably a reflection of Celtic substrate habits over territory known to have been earlier settled by Celts. There were similar attempts to explain some of the syntactical peculiarities of modern French, including such very bizarre constructions as 'Qu'est-ce que c'est que ça', literally 'what is it which it is which that?' meaning 'What's that?'. This exotic type of construction, since it was obviously not derived from Latin syntax and there was no historical chain of development that could be traced, might also be a result of Celtic substrate influence.

The work of Weinreich anchored all these vague speculations and provided a real foundation for their scientific assessment when he located the development of interference phenomena between one language and another *in the bilingual individual himself*. It was the merit, I think, of Weinreich in particular to show that interference between language systems, the absorption of loan words, of 'calques' (that is, semantic borrowings from other languages), of phonological, morphological and syntactical importations from one language to another, did not happen by some mysterious pro-

[2] These forms are quoted in standard Welsh orthography.

cess in mid-air or in mid-history, but in the nervous systems of bilingual speakers. It happened in individuals; and the more individuals there were who were bilingual in the two languages of the region (one of them perhaps in the process of being superseded by the other) and the greater their prestige in the community, the more chance there was of their own 'interfered-with' speech habits being adopted by monolingual speakers of the surviving language. It is in this way that we can explain the whole phenomenon of substrate linguistic features. Very often one can then adduce much more concrete evidence than has been adduced in the past.

The loan word issue is a case in point. It had been assumed until then, I think, that languages *consciously* borrowed words from other cultures — mainly in the written form; that writers who were clever and saw that their language needed a new word would borrow it from a language with which they were familiar. And there is no doubt that some conscious borrowing of words has gone on throughout the history of contacts between different linguistic communities. But it has now been demonstrated that for the greater part such borrowings are not conscious and they are not literary; they are unconscious, or at most subconscious. They arise through code-switching in speech by people who have a knowledge of more than one language. So that if we ask[3] why it is that in English we have the words 'calf' and 'sheep' and 'pig' derived from the Germanic tradition of Anglo-Saxon vocabulary, but 'veal' and 'mutton' and 'pork' derived from Norman French, then clearly we must not think of the importation of these words as having taken place by some deliberate policy, but rather see in it the way society functioned in those days. It was bilinguals who developed distinctive terms for the meat as opposed to the live animals. It has been said that semantic differentiation in these terms came about because the shepherds in the fields were of English stock and spoke Anglo-Saxon, and the lords who ate the meat were of Norman stock and used the French terms for these things. This is quite likely. But it does not explain how both sets of terms got into English. This could only happen in the linguistic habits of those Englishmen who knew some French — who were bilingual in the wide sense in which the word is here used.

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[3] As did Gurth the Saxon and Wamba, in *Ivanhoe*.

Whereas one can make out a case for some conscious borrowings of loan words, it is fairly clear that where we have phonemic interference between systems, this occurs entirely below the conscious plane. For instance [v] was at one time in English only a positionally restricted allophone (it did not occur initially, for example). With the wholesale importation of French loanwords it came to stand in minimal pairs like *very/ferry, veal/feel, veil/fail.* It thus became available as a separate phoneme in the language. The same applies to some borrowed morphological elements, such as the suffix *-age* from the French (first in words like *courage, plumage, village,* later in 'hybrids' such as *roughage, seepage, wastage*) and to more recent importations from French, such as the suffix *-ette* in words like *cigarette,* nowadays spreading to such items as *kitchenette,* 'a small kitchen', with more specific diminutive force. These become, as it were, independent, productive units of the language. It seems that the central role of individuals in this sort of process — of *bilingual* individuals, that is — had in the past not been adequately realized.

Before I leave this more general and theoretical framework for the consideration of interference, let me say that it also sheds completely new light on the phenomena of convergence and divergence in linguistic change. The cause of change in language has always been something of a mystery. Systems do change over time. The phonological system of any language changes in history, its morphology changes, its syntax changes, and we know that once a change has begun in one part of the system, it starts up a chain reaction whereby the whole of the system is affected and changes.[4] But it seems fairly clear now that the initial impulse, the spark, that sets up a change in a form of language whereby it then diverges from related languages, dialects or forms, often comes from contact with another linguistic community. It is not the *only* way in which language changes, because isolated communities have a language history just as do those which have contacts with other groups. But even in isolated communities, different forms of speech develop in different families and individuals, so that you have a side-by-side existence of family

[4] See especially A. Martinet, *Economie des changements phonétiques,* Berne, 1955.

styles and idiolects even within a small community; and the interaction of these, each of them producing forms slightly foreign to the others, seems sufficient to spark off a change. What is divergence, then from one point of view, that is, the divergence of one form of language from genetically related forms of language, is from another point of view convergence; so that as English became less like German, diverging from the common Germanic type, it became more like French, as it took on a good deal of the lexis, especially, and of the grammar of French. The balance in which synchronic states of language exist can be seen as the balance between the convergent and divergent trends of language, and in the convergent process, by which one language becomes more like another, the role of the bilingual individual is of the first importance.

Language learning, it follows from this, is only a special case of languages in contact. Before the work of Weinreich and Haugen, there was some intuitive realization of interference by teachers in practice. But the systematic, the '-emic' rather than the '-etic' nature of this interference was not earlier recognized and hence the remedies devised were rather *ad hoc*; individual errors were corrected as they occurred, but no general principles to explain the emergence of errors and to categorize them were evolved.

Of course one can overstress the importance of interference phenomena as a source of error in the foreign language in the learner. There are some errors, and there always will be, which derive merely from an inadequate command of the new medium and an attempt to generalize from what is known, so that you have false analogy on the basis of what is known of the language already. That false analogy may, or may not, bear some relationship to the systems of the native language. For instance, if a Filipino learner says in English, or writes in his composition, 'He ringed the bell,' this is not necessarily an example of interference from the mother tongue. This is interference from what the learner knows to be a common way of forming the past tense in English. It is the kind of error that English children make when they are learning their own language, until they are corrected. But if a Swedish learner produces the same wrong

form, his error is almost certainly caused, or reinforced, by the existence of the *weak* verb *ringa* in Swedish — and, in him, it is consequently more difficult to eliminate without specific comparison. By far the most systematic work that can be done to correct errors in a foreign language is precisely work based on an analysis of the impact of the one language on the other.

The sort of interference I mean, to come down to cases now, is the kind which at the phonological level I can best illustrate, perhaps, by examples taken from contrasts between Urdu stop consonants and English stop consonants. It is currently orthodox to say that, to have an analysis of interference phenomena, we must first have a full linguistic analysis of the two languages concerned, and then if we compare them we can predict which errors are likely. Perhaps. I find that in practice it is much safer to analyze the errors that are actually made and then start looking for the reasons in the system. Prediction is all very well, but I wonder who could predict, without having any error material to analyze, precisely which form the interference would take in a confrontation of partial phonemic systems such as these:

English

/p/ (including [p^h],[p])	/b/ (does not include *[b^h])
/t/ (including [t^h],[t])	/d/ (does not include *[d^h])
/k/ (including [k^h],[k])	/g/ (does not include *[g^h])

Urdu

/p/, /p^h/	/b/, /b^h/
/t/, /t^h/	/d/, /d^h/
/ṭ/, /$ṭ^h$/	/ḍ/, /$ḍ^h$/
/k/, /k^h/	/g/, /g^h/
/q/	

It is clear from such a partial comparison that Urdu presents a much fuller system of stops than English (it does not matter for our purposes whether the Urdu aspirated stops each constitute one phoneme or two). Accordingly, there is little difficulty in predicting what kind of interference we can expect in this area

when unsophisticated English speakers learn Urdu; one phoneme is substituted for more than one.[5] English /p/ does service for Urdu /p/, /ph/; English /t/ for Urdu /t/, /th,/,/ṭ/, and /ṭʰ/ (!); English /k/ for Urdu /k/, /kʰ/,/q/; English /b/ for Urdu /b/,/ bʰ/; English /d/ for Urdu /d/, /dʰ/, /ḍ/, /ḍʰ/ (!); and English g for Urdu /g/, /gʰ/. But what of the reverse situation? For rendering the English stop phonemes, our Urdu speaker suffers, in the Urdu substitutes apparently available to him, from *embarras de richesses*. Some substitutions are likely, but which? We may safely assume that Urdu unaspirated voiced stops rather than the phonetically unmatched aspirated variety, will render the English voiced series. But will he select the aspirated or the unaspirated Urdu series to render the English voiceless stop phonemes, which are marked by more, less, or zero aspiration according to their enviro ment? Or will he substitute the Urdu aspirated series for English aspirated allophones and the unaspirated series for English unaspirated allophones? For the English alveolar pair, /t/ and /d/, which in most environments are alveolar and non-retroflex, will he make a selection from the Urdu series /t/, /tʰ/,/ d/, /dʰ/ which are non-retroflex, but dental; or from the series /ṭ/, /ṭʰ/, /ḍ/, /ḍʰ/, which are alveolar but retroflex? Confronted with this particular contact situation, involving comparable phonetic areas with widely differing densities of phonemic 'population', I challenge anyone accurately to *predict* the substitution phonemes actually selected from the denser population to render those of the sparser population.

What in fact happens is this: (i) In the voiced series, the unaspirated Urdu /b/ and /g/ do services for English /b/ and /g/, as expected. None of the aspirated voiced stops, Urdu /bʰ/, /dʰ/, /dʰ/ and /gʰ/, is used. Urdu ḍ renders English /d/; but Urdu /d/ renders the English voiced (inter)dental fricative /ð/: Urdu-English /bay/ — 'buy', /gay/ — 'guy', /ḍay/ — 'die'; but /day/ — 'thy'. (ii) The *unaspirated* Urdu voiceless stops, excluding /q/, which is not used, render the English voiceless stops in all positions: Urdu-English /ke:p/ ([ke:p]) for /keyp/ ([kʰeyp(ʰ)]) — 'cape'; /eske:p/ ([eske:p]) for /iskeyp/

[5] In the voiceless series, English learners have to be taught not to omit or introduce post-plosive aspiration in Urdu according to its allophonic distribution in the English voiceless stop phonemes.

([ɪ̈skeyp(h)]) — 'escape'. Parallel to the rendering of English /d/ by Urdu /ḍ/ in the voiced series (see above), English /t/ is rendered by Urdu /ṭ/ — Urdu-English /ṭay/ ([ṭay]) does service for English /tay/ ([tʰay]), — 'tie'. But it is the Urdu *aspirated* dental stop /th/ which does service for the English voiceless (inter)-dental fricative /θ/: Urdu-English /tʰay/ for English /θay/ — 'thigh' (contrast /day/ — not /d̪ʰay/ — for 'thy' in (i) above). The remaining Urdu aspirated voiceless stops — /pʰ/, /tʰ/ and /kʰ/ — are not used; nor is the remaining unaspirated voiceless stop, the dental /t/[6] (contrast, in (i) above, the use of the Urdu *voiced* dental stop /d/ for the English voiced (inter)dental fricative /ð/).

Once we *know which* substitutions are in fact made, certain partial 'explanations' suggest themselves in the light of systematic contrast. For instance, the identification of the Urdu aspirated dental stop /tʰ/ with the English voiceless (inter)dental fricative /θ/ gives us a clue as to why the Urdu voiceless aspirated stops as a whole were not 'available' to render the English (allophonically) aspirated voiceless stops. Similarly, the use of another member of the Urdu dental stop series, namely /d/, to render the English voiced (inter)dental fricative /ð/, suggests why the Urdu dental stops as a whole were not available as substitutes for the English /t/ and /d/. True, it would have looked tidier if Urdu /dʰ/ had been used for English /ð/ (thus providing a full parallel with Urdu /tʰ/ for English /θ/), but one can see on merely impressionistic consideration, that the friction of the voiceless fricative is a more likely candidate for phonetic substitution by aspiration than that of the voiced variety.

You may now complain that when I challenged you to predict substitutions you were given incomplete information: I ought to have mentioned English /θ/ and /ð/, pointing out that Urdu has no fricatives of this order, and this might have narrowed down the field for substitution in the stop series. It might. On the

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[6] It is interesting to note that whereas Urdu words such as/si'tambər/— September', /aktu:bər/ — 'October',/. bo:tel/ — 'bottle' have /t/ (and this fact immediately suggests that English was not the donor language, otherwise one would expect /ṭ/, all but the most unsophisticated (who substitute the entire word in its Urdu phonetic shape) use /ṭ/ in the corresponding words when speaking English.

other hand, I might well have mentioned also that Urdu has /s/ and /z/, which are phonetically likely (but not in this instance actual) substitutes for /θ/ and /ð/.[7]

It must be emphasized that the substitutions actually made in language contact situations are not always those which native monoglots would consider most appropriate.[8] Thus, for instance, if you tell Urdu speakers to use the Urdu aspirated voiceless stops, rather than their unaspirated stops, in substitution for English initial voiceless stops, and to use Urdu dental stops for English alveolar stops, rather than their own alveolar retroflex stops, then the result sounds much more like English to the native English ear than do the habitual substitutions outlined above.

I cannot here embark on a lengthy consideration of the reasons for these facts; one might assume that structural inhibitions militate against the spontaneous use of two or more L_1 phonemes to render different allophones of a single L_2 phoneme, (e.g. both Urdu /p/ and /ph/ for the appropriate allophones of English /p/); but precisely the opposite holds good when, for instance, L_1 English learners of Japanese use English /f/ and /h/ for different allophones of one and the same Japanese phoneme. One cannot afford here to ignore the *institutionalisation of substitutions*, once made. Indo-Pakistani English *exists*, with all the substitutions outlined above (and many more); it is spoken by L_1 Urdu teachers, and *ipso facto* is taught by them. Some of the substitutions embodied in this variety of English are venerable enough to be thought of as substrate phenomena, not as substitutions made by new learners on 'first principles'. In some measure, the same is true of Filipino-English. The study of different historical strata of loanwords[9] makes it plain that if, after several decades, or centuries, of contact, two languages encounter each other *de novo*, each with its structure changed in the normal process of historical evolution, the interference phenomena also change — which is what one would expect.

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[7] Compare German-English [ˈmeːsət] — 'method', [zoː] — 'though' (as well as 'so').

[8] The fact that they do not is of considerable interest to students of linguistic structure, but does not make for accurate prediction!

[9] For instance, the Germanic loanwords in Finnish.

Of more immediate importance, from the point of view of the teacher who is a native speaker of the language he teaches, is the barrier which the L_1 structure represents to the perception of L_2 phenomena on their own structural terms. An English colleague of mine, a phonetician, once gave a course in phonetics, in the framework of general phonetics, for Pakistani teachers of English in institutions of higher education. After they had been introduced to general phonetic articulatory principles and terminology one of the exercises they were given to do was to describe in technical terms the phonemes of Urdu. I happened to look through one of the resultant inventories and noticed that the voiceless aspirated dental exemplified by the Urdu word *tha* — 'was', and thus transcribed, figured in the description as a voiceless fricative in Urdu. So I said 'That's very puzzling. Why do you call that a fricative?' 'Mr. So-and-So [the phonetician] called it a fricative'. I said 'I'm quite sure he didn't'. 'Well,' said the student, 'he said that the first sound in the English word 'think' (the student pronounced it [thiŋk]) was a fricative, and ours is the same sound.' This is one of the pitfalls of using modern methods to get rid of bad pronunciation habits. The phonetician had made the mistake, although he could not have foreseen it, of allowing the listener to make a false physical and structural identification of the phonetic material he was using as an illustration. He had said, of course, not [thiŋk] but [θink]. But the student, pre-conditioned by Urdu and by Urdu-English, had perceived it as [thiŋk].

Before I go on to other aspects of interference, I want to bring these remarks on contrastive phonology to a close by illustrating the way in which systematic ~~perpetual~~ perceptual distortion in both pupil and teacher can conspire to produce faulty diagnosis of an error where an awareness of structural factors is lacking. In English we have a phonemic contrast between the voiced labiodental fricative /v/ and the bilabial semivowel /w/, so that we contrast *weal* with *veal, wail* and *veil.* Now the Urdu system has only one phoneme, /ʋ/, in this area, and it is like the English fricative in that it has some friction. But it is also somewhat like the English semivowel in that it is as much bilabial as labiodental. It is somewhat like the Spanish bilabial voiced fricative, /β/, which you hear in words like *bebe.* In Urdu it occurs in

such words as /ɓa hã/ — 'there'. Now when Urdu speakers speak English they substitute Urdu /ɓ/ for both English /v/ and English /w/. The English teacher who speaks L_1 English, but is untrained in applied linguistics, hears Urdu-English /ɓeri: ɓel/ — 'very well' — as if it were /weri vel/ because, when he is expecting to hear *very*, he hears something that sounds too much like initial /w/ for him to interpret it as /v/. When he is expecting to hear /w/ in *well*, he hears something that rather suggests to him a /v/. In other words, he reinterprets what he hears in terms of the English phonemic system. There are two sources of error — one is the actual substitution made by the speaker and the other is the substitution in hearing made by the teacher. The teacher says, 'You can say /v/ and you can say /w/, why do you always say them the wrong way round? If you can say /weri vel/, you can also say/veri wel/, he says. 'Why do you insist on using /v/ when it should be /w/ and /w/ when it should be /v/?' Half of the fault is in the speaker and half is in the teacher. The teacher is not to be excused because he should be prepared for such things and know that he is likely to misinterpret; and it is here that he has to investigate the learner's phonemic system and compare it with his own in that area. My contention would be, then, that the diagnosis of errors is not so much a question of prediction as of accurate observation followed by a check on the relevant portions of the two systems. We have seen how this applies to the phonology; it applies with no less force to the morphology, the semantics, and the syntax.

Now a word about the kind of grammatical interference one finds. I will take my illustration from the efforts of my own son, who is bilingual in German and English, when, at the age of 3, he was trying to cope with the indefinite article systems of English and German simultaneously. He is now 12 years old and he has managed it very well. But he had quite a struggle at the age of three. He quite early learned to handle the relatively complicated article system of German. English then became the dominant language through change of environment, and here the child first set up a subject/object opposition *a/one* to correspond to German (masc.) *ein/einen*: 'What's that under the table?' 'A ball!' But 'I want one ball'. After much parental correction,

this was gradually abandoned in favour of the single form [ə]. In German, however, the single form [a], familiar to the child as the most frequently occurring element in the indefinite article system of the Viennese dialect, but not previously adopted by him, was now, for a brief period, substituted for all forms of the German indefinite article. Again after parental correction, the correct German system was restored, but meantime the pre-vocalic variant *an* [ən] had been 'discovered' in English, and for a short period subsequently, when German was once more the dominant language, this form tended to become generalized in all positions in English. Finally, the correct distribution of English and [ə] and [ən] was incorporated in his English, and thereafter the English and German systems were kept apart.

Semantic interference can sometimes be extremely difficult to detect. It can pass unnoticed for a long time until it leads to some kind of disaster. Again I should like to quote an example from the interference of German with English, this time in an adult. Someone with whom I am very closely acquainted had to go to a hospital for an internal X-ray, and telephoned the doctor, on the morning when the X-ray was due, to ask 'Doctor, do you want me to come sober?' I happened to be there at the time and I heard the nervous laugh at the other end of the telephone. After a long pause, the man said, 'Ha, ha, ha, why, yes, of course,' thinking, no doubt, 'What a whimsical patient I have here.' The English word *sober*, apart from meaning 'serious' in some contexts, that is 'not frivolous,' usually means of course 'not intoxicated,' the opposite of 'drunk'. And in German, a word which will often translate 'sober' is *nüchtern.* The German word also means 'not frivolous — serious' and 'not drunk'. But it has one further common meaning, and that is 'not having breakfasted yet.' So the question really meant 'Shall I have anything to eat or not before I come for the X-ray?' But the form in which it was posed, because of this semantic interference was, 'Shall I come sober?' The German version would have been quite unambiguous in the context of an X-ray.

Sometimes the interference is at le[illegible]al level. Very often, even when you have diagnosed [illegible]d devi[illegible]orrective drills for phonological errors, such as the differe[illegible]etween voiced and

voiceless, after you have for instance taught people to distinguish between /z/ and /s/, if that is necessary (and I believe it is in the Philippines), you may wonder why it is that people still make errors in certain words. So that Germans who with practice have become quite proficient at producing a voiceless fricative /s/ in words like 'soak' and 'mason' (in the latter instance it is mainly a matter of learning not to be misled by the spelling), who have also learned to distinguish initially and finally between /s/ and /z/, will nevertheless continue to talk about /ʒuniverziti/. Conversely, quite advanced English learners of German, who are certainly capable of distinguishing between /s/ and /z/, will, in speaking German, say /di .U.niversitet/ with/s/ for /z/. Because *university* and *Universität* are almost the same in their reference, and because they are recognizably "the same word' in print, the two words are wholly identified by the learner, and there is a powerful lexical interference in the pronunciation. The same applies to English pronunciations of the many French words that look like English words, and vice versa.

If I may sum up then, when we are diagnosing errors in a foreign language, we have first of all to be accurate in our observations and make an accurate analysis of errors both in the written and the spoken forms. When this has been done, it is not enough just to correct them individually. We then have to start looking for the causes, by means of structural comparison. Now, this is strictly speaking an 'engineering' job, because any 'pure' linguist will tell you that no two linguistic systems are, strictly speaking, comparable. They cover different areas. You cannot, it is said, compare whole phonemic systems, for instance. Each is a system in its own right. Nevertheless, if you are a bilingual speaker or a language learner, you do nevertheless compare phonemic systems subconsciously — not whole systems but bits of systems, and the basis for the comparison is a phonetic rather than a phonemic one in the first place. Cross-identifications are then made by mishearing in terms of the phonemic structure of the native speaker's own language. Once such identifications have been established, then all the phonemic consequences follow. When an English speaker learning Urdu phonetically identifies the sound /pʰ/ in Urdu as being very much like the sound in his own pro-

nunciation of the English word *'pit,'* then he subconsciously draws wrong phonemic conclusions. He assumes that the same phonemic patterning of aspiration versus nonaspiration (or less aspiration) that you have in the English phoneme, according to its position in the word, will apply in Urdu, too. So he makes a wrong subconscious phonemic analysis of Urdu as he is listening to it. This is of course at the untutored, elementary stage.

False generalisation of identifications made on the basis of partial similarities affects other levels of structure, too. In English, we have, as you know, a difference, which has syntactical implications between count-nouns and other nouns. We have *water* and *sugar*, which cannot normally take an indefinite article, and we have *ball* and *fan* and *floor*, which *can* take an indefinite article. Some forms of words fall into both sub-classes. When a speaker of a language which does not have this distinction, perhaps because there is no system of articles at all in his language, makes a correct identification of a word in one context, he will often generalize from his observation. Students of L_2 English, hearing such sequences as 'a funny experience,' 'I had a strange experience,' will be tempted to do what a guide did on a bus tour in Japan recently, when he said, 'I'm very glad to be able to introduce to you Mr. So-and-So, who is a very good driver. He has had fifteen years of experiences.' This disclosure would hardly have inspired confidence amongst the tourists in the bus, had they taken it seriously. The guide had failed to realize that 'experience' features in both sub-classes. It is often only through errors of this kind that one realizes that there is something in the target language to be investigated. I am now busily investigating the use of *any* in English, since I found on the day before I left Japan a notice outside the dining room of my hotel which said: 'Ladies entering the dining room are requested not to wear any slacks.' This has posed for me new questions about the semantic functions of the word *any* which would not otherwise have occurred to me. I am still trying to work out why that notice conveyed the wrong impression.

If I may conclude on this rather frivolous note, we have, then, constantly to revise our ideas of the most illuminating structural

presentation of a language for any particular purpose: in the language teaching situation it will be that analysis which highlights those areas of the structure which afford the most rewarding bases for L_1 - L_2 comparison and contrast. In the identification of such areas, error analysis provides invaluable clues and short-cuts. Even those of us who are teaching our own native language never know exactly what remains to be explained until the error comes along to inspire our investigation. Therefore I would say: error analysis and explanation rather than straightforward linguistic analysis and prediction. Thank you.

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